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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
NGUYEN, MERILYN P	

ART UNIT	PAPER NUMBER
2163	

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/669,465	THOMPSON ET AL.	
	Examiner	Art Unit	
	Merilyn P. Nguyen	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06/08/2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19 and 21* is/are pending in the application.

4a) Of the above claim(s) *20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19 and 21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *Detailed Action*.

DETAILED ACTION

1. In response to the communication dated 06/08/2006, claims 1-19 and 21 are pending in this action as the result of the withdrawal of claim 20 which directed to a non-elected invention.

2. This application is a continuation of 09/684,907 now patent No. 6,810,401.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quintero et al (U.S. Patent No. 5,293, 479) in view of Tsuda (U.S. Patent No. 5,175,795).

Regarding claim 1, Quintero discloses configuration system (product designing with components assembling, col. 1, lines 10-17, col. 4, lines 53-61), user interface (expert user interface, col. 8, lines 59-67 to col. 9, lines 1-29), wherein the user interface receives input data for a desired configuration (col. 4, Lines 53-67 to col. 5, lines 1-24, Note: design tool with user interface designs and assembles components for any configuration, col. 9, Lines 29-37), see (108, FIG. 1 , FIG. 6, FIG. 7A, col. 4, lines 7-67 to col. 5, Lines 1-37), and

receiving data input from the user interface (expert user interface, col. 8, lines 59-67 to col. 9, Lines 1-29), and outputs configuration data to the user interface (FIG. IA-D)

in response to a frame-based inference (inference engine, col. 8, Lines 37-64, col. 9, Lines 29-37, col. 15, lines 45-57, col. 2, Lines 9-25, Note: inference engine includes component (frame is a basic component of furniture, col. 4, Lines 3-25, col. 9, lines 28-37) selecting and connecting, thus, auto frame connection is done by inference engine) of the input data, see (col. 9, Lines 65-67 to col. 10, Lines 1-33). Quintero does disclose the frame assembling (See FIG. IA-D, col. 2, lines 46-50, col. 4, lines 12-25). Quintero does not explicitly disclose "the frame engine". On the other hand, Tsuda teaches a "frame engine" (See Abstract and Fig. 18 and col. 16, lines 4-11, Tsuda et al.). However, the definition of engine is an analogous piece of software or program functions. And disclosed system is a configuration and assembling (e.g., designing furniture processing) basic component of frame of furniture. And system of Quintero assembles frames by software functions. Therefore, it would have been obvious a person having ordinary skill in the art the time invention was made to include the frame engine of Tsuda in the system of Quintero because the software program function assembles the frame component to make the furniture product. The motivation would have been to execute procedures to predict performance value of product.

Regarding claim 2, Quintero/Tsuda discloses the database coupled to the frame engine (as discussed above in claim1), storing configuration data selectively retrieved for output in response to inferences made by the frame engine (See col. 9, Lines 8-59).

Regarding claim 3, Quintero/Tsuda discloses the frame engine subjects configuration data to be output to the user interface to pertinent rule-based inferences

(See col. 7, Lines 47-67 to col. 8, Lines 1-67) before being output to the user interface (See col. 8, Lines 36-67 to col. 9, Lines 1-59).

Regarding claim 4, Quintero/Tsuda discloses the rule engine, coupled to the frame engine, wherein the rule engine subjects selected configuration data to be output to the user interface to pertinent rule-based inferences before being output to the user interface, (See col. 8, Lines 36-67 to col. 9, lines 1-59).

Regarding claims 5 and 18, Quintero/Tsuda discloses that the frame engine represents data concerning configuration in a hierarchical structure, with frame corresponding to configuration categories, wherein the frames acts as node of the hierarchical structure containing a collection of slots corresponding to configuration features and options (see col. 12, lines 64-67 to col. 13, lines 1-12).

Regarding claim 6, Quintero/Tsuda discloses that the database stores data representative of product knowledge pertaining to products that may be configured by the system, see (col. 18, lines 55-67 to col. 19, lines 1-67 to col. 20, lines 1-63).

Regarding claim 7, Quintero/Tsuda discloses that the database stores a plurality of questions for selectively output the user interface based on frame-based inferences made by the frame engine in response to answers (col. 9, lines 65-67 to col. 10, lines 1-24) input through the user interface, (see col. 18, lines 55-67 to col. 19, lines 1-67 to col. 20, lines 1-63).

Regarding claim 8, Quintero/Tsuda discloses that the system comprising data analysis subsystem pertaining analysis of configuration data to be output to the user interface, see (col. 8, lines 58-67 to col. 9, lines 1-67 to col. 10, lines 1-63), graphics formatting output subsystem providing graphical representations of configuration data output to the user interface (see col. 8, lines 58-67 to col. 9, lines 1- 67 to col. 10, lines 1-63).

Regarding claim 9, Quintero/Tsuda discloses that the data analysis subsystem comprises a pricing engine providing data corresponding to the configuration data output to the user interface (see FIG. 5, FIG. 13A-B, FIG. 14, col. 2, lines 9-36).

Regarding claim 10, Quintero/Tsuda discloses that the graphics formatting output subsystem comprises a parametric drawing engine providing illustrations of configuration data to the user interface, see (col. 8, lines 58-67 to col. 9, lines 1-67 to col. 10, lines 1-63).

Regarding claims 11 and 17, Quintero/Tsuda discloses that the method and article of manufacturing for machine-readable storage medium of configuring a project, accessing a user interface, see (expert user interface, user command, col. 8, lines 59-67 to col. 9, lines 1-29, col. 13, lines 24-34), initiating a project for configuration, see (design project, col. 6, lines 37-48, col. 19, lines 33-42); configuring (design) the project by entering in response to project selections, see (col. 4, lines 33-62, col. 6, lines 37-48); in response to project made in the configuring step, see (col. 4, lines 33-62, col. 6, lines 37-

48); and outputting project configuration data to the user interface based on inferences (inference engine, col. 9, lines 28-37) made, see (expert user interface, output tools and graphic system (col. 9, lines 37-59) are used to display output of configuration and all designing procedures, see (FIG. IA-D, col. 8, lines 58-67 to col. 9, lines 1-37, col. 9, lies 65-67 to col. 10, lines 1-33). Quintero does not explicitly disclose the frame-based inference. On the other hand, Tsuda discloses a frame-based inference (see col. 4, lines 5-13 and Fig. 5 and col. 8, lines 39-55, Tsuda et al.). Because Quintero's disclosed system is a design tool for product (e.g., designing furniture) using computer aided design (CAD) software system. And a frame is a basic component of furniture designing (col. 4, lines 12-25). The inference engine includes component (frame) selecting and connecting, thus, auto frame connection is done by inference engine, see (col. 8, lines 37-64, col. 9, lines 29-37, col. 15, lines 45-57, col. 2, lines 9-25), which means that the designing (connecting and assembling) each component (frame) is done by rule base inference engine. Therefore, it would have been obvious a person having ordinary skill in the art the time invention was made to include the frame-based inference in the system of Quintero to perform the auto-designing using knowledge based inference engine. Because the frame-based inference engine selects and applies rules from rule base automatically, which improves design process time and prevents from illegal design by a user.

Regarding claim 12, Quintero/Tsuda discloses that configuring step involves answering a plurality of questions presented, wherein the questions to be presented during the configuring step are stored in a database and selected for presentation based on

inferences made in the performing step, see (col. 9, lines 65-67 to col. 10, lines 1-24, col. 18, lines 55-67 to col. 19, lines 1-67 to col. 20, lines 1-63).

Regarding claim 13, Quintero/Tsuda discloses that the configuring step further comprises the substep of presenting preferred answers to select questions presented on the user interface, see (col. 9, lines 65-67 to col. 10, lines 1-24, col. 18, lines 55-67 to col. 19, lines 1-67 to col. 20, lines 1-63).

Regarding claim 14, Quintero/Tsuda discloses that the performing step further comprises the substep of performing a rules-based inference in response to project selections made in the configuring step, see (col. 7, lines 16-67 to col. 8, lines 1-67 to col. 9, lines 1-65).

Regarding claim 15, Quintero/Tsuda discloses that the configuring step further comprises the substeps of graphically selecting parameters to configure the project based upon graphic representations of variations of characteristics of components to be selected for the project, see (col. 4, lines 53-61, col. 5, lines 24-67, col. 6, lines 37-48, col. 8, lines 36-67 to col. 9, lines 1-60); manipulating schematically configured illustrations of components to be selected for the project, see (col. 4, Lines 53-61 , col. 5, Lines 24-67, col. 6, Lines 37-48, col. 8, lines 36-67 to col. 9, lines 1-60).

Regarding claim 16, Quintero/Tsuda discloses that wherein the project to be configured includes a custom product (col. 1, lies 60-67 to col. 2, Lines 1-57), accessing a

catalog page to display graphical and textual information pertinent to the product to be configured, see (col. 8, Lines 58-67 to col. 9, Lines 1-65); accessing a custom shapes editor to size a product upon configuration and to select a customized combination of dimensional parameters for the product, see (col. 11, lines 43-67 to col. 12, lines 1-67); accessing an accessories module containing product accessory information, see (col. 11, lines 43-67 to col. 12, Lines 1-67); producing technical specifications containing technical information regarding the project as configured (see col. 12, lines 34-67 to col. 13, Lines 1-67 to col. 14, Lines 1-61).

Regarding claim 19, Quintero/Tsuda discloses that the performing step comprises the substep of subjecting selected configuration data of the project to pertinent rules-based inferences, see (col. 8, lines 36-67 to col. 9, lines 1-65).

Regarding claim 21, Quintero/Tsuda discloses organizing nodes on parent node and child node relationships, wherein each child node inherits attributes of a respectively associated parent node (See Fig. 18 and col. 16, lines 4-11, Tsuda et al.).

Response to Arguments

4. Applicant's arguments filed 06/08/2006 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention

where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Quintero discloses interrelating components of a system according the characteristics of the components and predetermined rules, wherein the components of the system are used by the design tool to form a design of functional assemblies. Please see col. 3, lines 8-12 and 60-62. One of the basic components of the system is a frame (See col. 4, lines 12-25). And the disclosed system of Quintero is a configuration and assembling (designing furniture processing (See col. 3, lines 20-45)) basic component of frame of furniture. Quintero is silent as to disclose "the frame engine". However, the engine is an analogous piece of software or programs functions. Tsuda teaches a "frame engine" (See Abstract and Fig. 18 and col. 16, lines 4-11). And the "frame engine" of Tsuda commences execution of a procedure (Abstract). Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine or corporate Quintero with Tsuda as to include the frame engine of Tsuda into the system of Quintero. Because the frame engine of Tsuda utilize knowledge items described in the forms of rules and frames (See col. 3, lines 45-47), therefore, incorporating the frame engine of Tsuda into the system of Quintero would utilize the knowledge base of Quintero in order to assemble the frame component to make the furniture product.

Applicant argues, "The citation to the use of "rules" in Quintero et al. with respect to these claims becomes irrelevant after modification of Quintero et al. in view of Tsuda et al. Even if it were assumed that the teaches of a "frame-engine" of Tsuda et al. could

somehow be properly applied to Quintero et al., the resulting system would have the "rule-based engine" of Quintero et al. replaced by the "frame-engine" of Tsuda et al." The Examiner respectfully disagrees. The Examiner incorporate the frame engine of Tsuda into the system of Quintero as addressed above, however, the frame engine of Tsuda does not replace the "rule-based engine" as Applicant argued. Incorporating is different than replacing.

Applicant argues, "nothing in Quintero et al. or Tsuda et al., taken alone, or in combination, discloses or suggests the use of a frame engine that "represents data concerning configuration in a hierarchical structure, with frames corresponding to configuration categories, wherein the frames act as nodes of the hierarchical structure containing a collection of slots corresponding to configuration features and options" as recited in claim 5 (and similarly in claim 18). The citation in the Office Action to the use of a "hierarchy" in Quintero et al. with respect to these claims becomes irrelevant after modification of Quintero et al. in view of Tsuda et al. Nothing in the combined teachings indicates that the data infrastructure (e.g., "hierarchy") required for use in a "rule-based" system of Quintero et al. would be maintained after replacement with the "frame-engine" of Tsuda et al. For this reason alone, the rejection of claims 5 and 18 should be reconsidered and withdrawn." The Examiner respectfully disagrees. The Examiner incorporate the frame engine of Tsuda into the system of Quintero as addressed above, however, the frame engine of Tsuda does not replace the "rule-based engine" as Applicant argued. Incorporating is different than replacing.

Conclusion

5. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Merilyn P Nguyen whose telephone number is 571-272-4026. The examiner can normally be reached on M-F: 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

MN
September 04, 2006

UYEN LE
PRIMARY EXAMINER